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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/970,312	11/14/97	ALLEN	D TH0776X

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PM82/0831

EXAMINER

LEE, J

ART UNIT	PAPER NUMBER
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3673

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DATE MAILED: 08/31/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/970,312

Applicant(s)
Allen et al.

Examiner
Jong-Suk (James) Lee

Group Art Unit
3673



☒ Responsive to communication(s) filed on Jun 12, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 2, and 4-8 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, and 4-8 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Nov 14, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Serial Number:08/970,312

Art Unit: 3673

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DETAILED ACTION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to **Group Art Unit 3673**.

2. The amendment filed on June 12, 2000 has been entered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: ref. no. 60, buoyancy cans, on page 6, line 23; ref. no. 62, bushing, on page 6, line 24 in the specification. Correction is required.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

Claim 1, line 4: "seperated" should be --separated-- to correct typographical error.

Claim 1, line 4: "lowere" should be --lower-- to correct typographical error.

Appropriate correction is required.

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horton'467 in view of Jones.

Horton'467 discloses a deep water offshore apparatus comprising of a vertically oriented elongated floating hull (24) with a buoyant upper section; a ballasted lower section (70, 72); a truss member (26) separated the floating hull from the lower ballasted section; an anchoring system (28, 30) connecting the hull to the ocean floor (see Figs.1-3; col.3, lines 22-67; col.4, lines 1-62; col.5, lines 3-62).

However, Horton'467 fails to disclose or fairly suggest a vertically oriented fairing shaped profile section rotatably mounted about the hull. Jones discloses a riser pipe (11) having a

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1 vertically oriented fairing (21) mounted on the riser pipe for free rotation about it; the fairing's
2 factors affecting the efficiency of a streamlined form are the ratio of its thickness at its widest
3 portion to its chord or length and the distribution of its thickness along the length of its chord.
4 The range of the ratio is about 30 % for the fairing body (21) (see Fig. 1; col.2, lines 55-68; col.3,
5 lines 1-66; col.4, lines 32-68)

6 Therefore, in view of Jones, it would have been obvious to one of ordinary skill in the art
7 at the time the invention was made to add the fairing section to the floating hull in order to
8 provide less resistance to lateral forces resulting from water current drag.

9
10 7. Claims 4, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over
11 Horton'467 as modified by Jones, as applied to claims 2 and 6, respectively, and further in view of
12 Schuh. The teachings of Horton'467 modified by Jones have been discussed above.

13 However, the teachings of Horton'467 modified by Jones fail to specifically disclose the
14 chord to thickness ratio between about 1.10 and 1.50. Schuh discloses a streamlined riser pipe
15 comprising of a "ultra-short" fairing assembly (18-22) inherently having the chord to thickness
16 ratio being in the range of 1.10 and 1.50 as depicted in Fig.2 (see Figs. 1-2; col. 2, lines 33-69;
17 col.3, lines 23-35).

18 Therefore, in view of Schuh, it would have been obvious to one of ordinary skill in the art
19 at the time the invention was made to further modify the fairing of Horton'467, as modified by

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1 Jones, by incorporating the ultra short fairing shape to the fairing as taught by Schuh in order to
2 provide the advantage of having a much lower drag coefficient wherein, the lower drag
3 coefficient, the lower the resistance of the cylindrical floating hull to fluid flow.

4
5 ***Response to Arguments***

6 8. Applicant's arguments with respect to claims 1-3 have been considered but are moot in
7 view of the new ground(s) of rejection.

8
9 ***Conclusion***

10 9. The prior art made of record and not relied upon is considered pertinent to applicant's
11 disclosure: Allen et al. disclose a spar with improved VIV performance; Danazcko et al. disclose a
12 floating/tensioned production system with caisson; Ayers discloses a faired umbilical cable; Wilde
13 discloses a flotation and access apparatus for sub-sea drilling structure.

14
15 10. Any inquiry concerning this communication or earlier communications from the examiner
16 should be directed to Jong-Suk (James) Lee whose telephone number is (703) 308-6777. The
17 examiner can normally be reached between the hours of 6:30 AM to 3:00 PM Monday thru
18 Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
19 Eileen D. Lillis, can be reached on (703) 308-3248. The fax phone number for this Group is

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1 (703) 305-3597.

2 Any inquiry of a general nature or relating to the status of this application or proceeding
3 should be directed to the Group receptionist whose telephone number is (703) 308-2168.

4
5 Jong-Suk (James) Lee *TL*

6 August 24, 2000


Thomas B. Will
Supervisory Patent Examiner
Group 3600